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32. (New) The information storage medium of Claim 24, wherein the support information includes at least one of a group including:

a random access indicator support flag;

a unit start indicator support flag; and

an identification code.

REMARKS

Favorable reconsideration of the above-identified patent application in light of the foregoing amendment and the following remarks is respectfully requested.

Claims 3-5, 7, 9, 11 and 14-28 remain active in the application, and Claims 29-32 are newly presented.

THE MAY 21, 2002 OFFICE ACTION. The examiner has withdrawn the previous rejections based on art. However, the examiner has applied three new references against the claims. The rejection is made "final" on the principle that Applicants' February 27, 2002 Amendment necessitated the new grounds of rejection.

The rejections in the May 21, 2002 final Office Action are as follows:

Claims 3, 20-23:	35 U.S.C. § 112, ¶ 2 (indefiniteness)
Claims 3-5, 15, 19-24:	35 U.S.C. § 101 (statutory subject matter)
Claims 19-24:	U.S. Patent No. 5,819,004 (<i>Azadegan et al.</i> ; newly cited)
Claims 3-5, 7, 9, 11, 15-28:	U.S. Patent No. 6,112,009 (<i>Kikuchi et al.</i> ; newly cited)
Claims 3-5, 7, 9, 11, 15-18, 25-28:	<i>Azadegan et al.</i> in view of U.S. Patent No. 5,856,973 (<i>Thompson</i> ; newly cited)
Claim 14:	<i>Kikuchi et al.</i> in view of U.S. Patent No. 5,686,954 (<i>Yoshinobu et al.</i> ; previously cited)
Claim 14:	<i>Yoshinobu et al.</i> in view of <i>Thompson</i>

RESPONSE TO OFFICE ACTION. Applicants respectfully traverse the rejection under 35 U.S.C. § 112, ¶ 2. There is no legal requirement or rule for a *medium* claim (Claim 3) to recite hardware “means.” Moreover, no *apparatus* claims, such as rejected apparatus Claims 20-23, need recite “means” in order to be definite under 35 U.S.C. § 112, ¶ 2 or any rule. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, ¶ 2 are respectfully requested.

Applicants also respectfully traverse the rejection under 35 U.S.C. § 101. Claims 3-5 and 15 are directed to a *medium*, and Claims 19-24 are directed to a *transport stream structure* (Claim 19), or an *apparatus* (Claims 20-23), or a *medium* (Claim 24)—and *not* to “data” as the Office Action asserts. These claims constitute statutory subject matter for the following reasons:

- The Court of Appeals for the Federal Circuit (CAFC) has ruled that statutory subject matter encompasses data structures, see *In re Lowry*, 32 F.3d 1579 (Fed. Cir. 1994); see also USPTO’s *Examination Guidelines for Computer-Related Inventions* (1184 OG 87, March 26, 1996; see also MPEP § 2106), (Compression/Encryption Claim Examples, exemplary “Claim 13” to Automated Manufacturing Plant, approving claim to a “computer data signal embodied in a carrier wave...” also reproduced at <http://www.uspto.gov/web/offices/pac/dapp/oppd/pdf/compenex.pdf>).
- An *apparatus* is clearly statutory subject matter under the explicit language of the statute (“machine”).
- Finally, contrary to the implications in the Office Action, a *medium* clearly constitutes an article of manufacture, despite the fact that the claims do not recite the statute’s literal words, “article of manufacture” (see also *In re Beauregard*, 53 F.3d 1583 (Fed. Cir. 1995)).

Therefore, reconsideration and withdrawal of the rejection under 35 U.S.C. § 101 are respectfully requested.

Applicants also traverse the rejections asserted under 35 U.S.C. §§ 102, 103, noting three distinguishing features that are recited in various claims:

- Feature I. Claim 3 (indicative of Claims 14-18 in relevant part) recites “partial application packets obtained by splitting said application packets across boundaries of said stream packets” (see Applicants’ FIG. 39 and related text on page 77, lines 19-33). According to the DVD-SR (stream recording) standard,¹ any following stream packet (S_PKT) in a stream object (SOB) may split application packets (AP_PKTS) across stream packet (S_PKT) boundaries.
- Feature II. Claim 7 (indicative of Claim 11 in relevant part) recites “a first byte of said application timestamp of a first one of said application packets is aligned to a start of an application packet area in a first one of said stream packets” (see Applicants’ FIG. 39 and related text on page 77, lines 14-18). According to the DVD-SR standard, the first byte of the ATS of the first application packet shall be aligned to the start of the application packet area in the first stream packet at the beginning of the stream object.²
- Feature III. Claims 19 an 24 refer to *support information* for an MPEG *transport* stream. (See the non-limiting example shown in Applicants’ FIG. 7(b)).

None of the four cited references disclose or teach either Feature I or Feature II, and the references applied against Claims 19 and 24 do not disclose Feature III. The Office Action

¹Last paragraph of SR5-5.

²Id.

appears to overlook the particular types of streams that are recited in the claims, citing references that are only vaguely related to the invention. However, this is improper:

...for anticipation under 35 U.S.C. § 102, the reference *must teach* every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught *must be* inherently present.³

A claim is anticipated only if *each and every* element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” [citation omitted] “The *identical invention* must be shown in *as complete detail* as is contained in the ... claim. [citation omitted].⁴

To establish *prima facie* obviousness of a claimed invention, *all the claim limitations* must be taught or suggested in the prior art. [citation omitted] *All words in a claim* must be considered in judging the patentability of that claim against the prior art. [citation omitted]⁵

For example, the Office Action correctly admits that Azadegan *et al.* do not disclose partial application packets, but the portion of the Thompson patent to which the Office Action refers (column 4, lines 64-68) merely relates to inserting private application data into fixed areas of headers, and the combination of references does not disclose or suggest Feature I (above).

And whereas Azadegan *et al.* and Kikuchi *et al.* may disclose features related to a DVD-Video bitstream, their disclosures do not relate to the *MPEG transport stream* of Claim 19 and Claim 24.

Accordingly, none of the rejected independent claims are disclosed in or suggested by the cited references. Therefore, a careful examination of the claims, including reference to the

³MPEP § 706.02(a), subsection entitled DISTINCTION BETWEEN 35 U.S.C. 102 AND 103 (emphasis added).

⁴ MPEP § 2131 (emphasis added).

⁵MPEP § 2143.03 (emphasis added).

specific type of stream involved, is requested. In any event, reconsideration and withdrawal of the rejections are respectfully requested.

Newly-presented apparatus Claims 29, 30 and 31 are based on Claims 11, 14 and 24, respectively; newly-presented Claim 32 is supported by the description at the bottom half of page 23 of the specification. Thus, Claims 29-32 do not involve new matter; and favorable consideration and allowance of the newly presented claims are respectfully requested.

In view of the foregoing amendment and the preceding remarks, it is believed that all pending claims are allowable. Reconsideration and withdrawal of the pending rejections are respectfully requested.

It is respectfully submitted that the pending claims are allowable and that the case is in condition for allowance at this time. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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Serial No. 09/482,085

Amendment Filed on: 8-14-02

ATTACHMENT

SHOWING CHANGES TO APPLICATION

1. (*Canceled*)

2. (*Canceled*)

Claims 3-5. (Not being amended at this time)

6. (*Canceled*)

7. (*Not being amended at this time*)

8. (*Canceled*)

9. (*Not being amended at this time*)

10. (*Canceled*)

11. (*Not being amended at this time*)

12. (*Canceled*)

13. (*Canceled*)

Claims 14-19. (Not being amended at this time)

20. (Amended) An apparatus [configured to decode] comprising:
means for decoding the MPEG transport stream of Claim 19.

21. (*Not being amended at this time*)

22. (Amended) An apparatus [configured to encode] comprising:
means for encoding the MPEG transport stream of Claim 19.

Claims 23-28. (Not being amended at this time)

29. (New) A reproducing apparatus configured to reproduce bitstream information that includes:

a) a data object formed of one or more data object units each of which serves as a prescribed data unit;

b) control information of said data object, said control information including access unit data used for accessing an access unit that is a part of contents of said data object; and

c) a bitstream formed of a series of packets, said bitstream including contents of said data object and contents of said control information, wherein contents of said bitstream are reproduced from said bitstream information, based on said access unit data;

wherein:

said packets include one or more sequential or continuous stream packets containing one or more application packets; and partial application packets obtained by splitting said application packets across boundaries of said sequential or continuous stream packets,

each of said application packets has an application timestamp at a leading portion thereof, and

when a first byte of said application timestamp of a first one of said application packets is aligned to a start of an application packet area in a first one of said stream packets located at beginning of said data object, the split one of said partial application packets is reproduced based on contents of access information provided in said stream packets.

30. (New) A reproducing apparatus configured to reproduce information from an information medium that includes:

a) a data area configured to store a data object formed of one or more data object units,
wherein:

- 1) each of the one or more data object units corresponds to one or more stream blocks that are filled with MPEG transport stream information;
 - 2) said data object is recorded on said information medium in a series of packets that each include one or more sequential or continuous stream packets that include one or more application packets; and
 - 3) at least one of said stream packets includes one or more partial application packets obtained by splitting one or more said application packets across boundaries of said stream packets; and
- b) a management area configured to store management information relating to said data object.

31. (New) A reproducing apparatus configured to reproduce information from an information storage medium that includes:

a data area configured to store an MPEG transport stream; and

a management area configured to store any support information that may be stored in the MPEG transport stream.

32. (New) The information storage medium of Claim 24, wherein the support information includes at least one of a group including:

a random access indicator support flag;

a unit start indicator support flag; and

an identification code.